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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/532,093      | 04/21/2005  | Christophe Beaucant  | 449122080600        | 6210             |

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| EXAMINER |
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D AGOSTA, STEPHEN M

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| ART UNIT | PAPER NUMBER |
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2617

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10/23/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/532,093

Applicant(s)

BEAUGEANT ET AL.

Examiner

Stephen M. D'Agosta

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to because figures 2 and 3 contain words in a foreign language. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. US 2003/0133565 and further in view of Urbanski US 5,668,871 and {Gupta US 2003/0072439 OR Fuse US 2002/0015488}

As per **claims 1, 8 and 12**, Chang teaches a method for reduction of an echo in uplink data coming from a terminal of a telecommunications network (title, abstract and figure 1), comprising:

providing a downlink data copy of downlink data to be transmitted from the telecommunications network in the direction of the terminal (figure 1 shows the downlink signal from decoder #123 being outputted to both the loudspeaker #122 and adaptive filter #124, eg. where Chang's outputting the data to the adaptive filter reads on the claim),

with a downlink data copy being decoded with a transcoder and used for reduction of the echoes in uplink data, while downlink data is transmitted in the direction of the terminal (figure 1 shows the uplink voice-plus-echo from microphone #128/#120 being fed into the Adaptive Filter which is combined with downlink data from decoder #123),

**but is silent on** coded in a mobile radio codec format.

Chang does teach/infer that his invention can be used in a wireless network (see figure 3).

Urbanski teaches an echo cancellation device for use within cordless or cellular systems/phones (see Abstract, also figure 3 which shows downlink data copied/combined with uplink data at echo canceller #303).

The examiner also notes that various different embodiments exist whereby echo is removed from a uplink signal based on a copy of the downlink signal, see **Gupta** figure #1 or **Fuse** figure #1.

It would have been obvious to one skilled in the art at the time of the invention to modify Chang, such that it is used within a mobile system/format, to provide means for echo cancellation for wired, cordless or mobile phones.

***With further regard to claim 12***, the “delay device” can be viewed as the process of the echo moving from the loudspeaker through the microphone and to Chang’s Adaptive Filter, which reads on “for echo suppression of uplink data arriving thereafter in time, including an echo of the downlink data, to take account of the data delay time from the terminal and back and/or the acoustic signal delay time from a loudspeaker to a microphone”.

As per **claim 2**, the combo teaches Claim 1, wherein the downlink data copy and the uplink data are decoded and an echo in the decoded uplink data is removed taking into account the decoded downlink data copy (Chang teaches comparing the received downlink data to the uplink data).

As per **claim 3**, the combo teaches Claim 1 wherein the telecommunications network is a cellular mobile radio network and the terminal is a mobile radio terminal (both Chang and Urbanski teaches mobile/cellular networks and phones).

As per **claims 4 and 9**, the combo teaches claim 1/8, further comprising, decoding and encoding the downlink data copy which is only transcoded and not encoded back into the original format (Chang teaches comparing the downlink and uplink signals. One skilled could either compare them at broadband or baseband and/or transcoded or encoded).

As per **claims 5 and 10**, the combo teaches claim 1/8, wherein the uplink data coming from the terminal and the downlink data is encoded into a mobile radio codec format (Chang and Urbanski teach cellular systems which inherently encode/decode data into mobile radio codec format(s)).

As per **claims 6 and 11**, the combo teaches claim 1/8, wherein the transmission in the telecommunications network is undertaken at least partly packet oriented over data connections (Chang figure #3 shows a mobile device connecting to the Internet. The examiner also notes that VoIP is well known too).

***With further regard to claim 11***, the examiner notes that ATM uses cells, which are fixed length "packets", and thus reads on a packet-oriented connection.

As per **claim 7**, the combo teaches claim 1, wherein downlink data is used in each case for echo suppression in uplink data coming after it arrives at an echo canceller device including an echo of this downlink data, to take account of the data runtime, from the terminal and back and/or the acoustic signal delay time from a loudspeaker to a microphone (Chang's design shows the downlink data being combined with the uplink data at the Adaptive Filter whereby downlink data is used for echo suppression in uplink data, eg. coming after it arrives at an echo canceller device including an echo of this downlink data and thus takes into account of the data runtime, from the terminal and back and/or the acoustic signal delay time from a loudspeaker to a microphone).

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

***See the PTO-892 form which lists additional prior art not used in the above rejection.***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

STEVE M. D'AGOSTA  
PRIMARY EXAMINER

*[Handwritten signature]*  
8-28-07